

## EXPLANATION OF THE PLATES.

## PLATE IV.

- Fig. 1. *Bursa gnorima*.  
 Fig. 2. *Alectryon (Phrontis) alcimus*.  
 Fig. 3. — (*Hima*) *protusidens*.  
 Fig. 4. — (—) *gwatkinianus*.  
 Fig. 5. *Pisania townsendi*.  
 Fig. 6. *Mitra raticinator*.  
 Fig. 7. — (*Pusia*) *iteina*.  
 Fig. 8. *Lamellaria (Chelynotus) berghi*, Desh. (juv.).  
 Fig. 9. *Melanella lampra*.  
 Fig. 10. *Mucronalia aethria*.  
 Fig. 11. *Turbonilla umbrina*.  
 Fig. 12. — *exilispira*.  
 Fig. 13. — *patruelis*.  
 Fig. 14. — *thryallis*.  
 Fig. 15. *Styloptygma clymene*.  
 Fig. 16. *Eulimella squarrosula*.  
 Fig. 17. *Cingulina secernenda*.  
 Fig. 18. *Triphora incolumis*.

## PLATE V.

- Fig. 19. *Amphithalamus psomus*.  
 Fig. 20. *Rissoina (Chiliosigma) refugium*.  
 Fig. 21. *Fossarus eutorniscus*.  
 Fig. 22. — (*Couthouyia*) *cancellarius*.  
 Fig. 23. *Triphora interpres*.  
 Fig. 24. *Leptothyra miltochrista*.  
 Fig. 25. *Minolia charmosyne*.  
 Fig. 26. — (*Conotrochus*) *eutyches*.  
 Fig. 27. *Euchelus xeniolum*.  
 Fig. 28. *Cylichna euthlasta*.  
 Fig. 29. *Oxyinoë omega*.  
 Fig. 30. *Cylindrobulla systemma*.  
 Fig. 31. *Dentalium tomlini*.  
 Fig. 32. *Phacoides malcolmensis*.  
 Fig. 33. *Divaricella cypselis*.  
 Fig. 34. *Cypricardia vertumualium*.  
 Fig. 35. *Carditella concinna*.

XVII.—*Descriptions and Records of Bees.*—LXXIX.

By T. D. A. COCKERELL, University of Colorado.

*Colletes gigas*, sp. n.

♀.—Length about 17 mm.; anterior wing 12 mm.

Black, including legs and antennæ, the middle of flagellum faintly reddish beneath; tegulæ clear ferruginous; hair of

face pale fulvous, with some fuscous, of region about ocelli mainly fuscous, of cheeks pale but not white; clypeus longitudinally depressed in middle, coarsely punctured, with a marked tendency toward longitudinal ridges; malar space about half as long as broad; ocelli fulvous; vertex with very small irregular punctures; mesothorax strongly punctured; base of metathorax with coarse rugæ; thorax above with dense bright fulvous hair, sparsely tipped with fuscous; tubercles with fulvous hair, and a patch just behind tipped with fuscous; pleura with pale ochreous-tinted hair. Wings reddish hyaline, nervures and the small stigma ferruginous, radial nervure fuscous; second submarginal cell extremely broad, receiving first recurrent nervure in middle. Legs with pale ochreous-tinted hair; spurs ferruginous. Abdomen dullish, without distinct punctures; hind margins of segments broadly testaceous, and covered with appressed ochreous hair, but the first band is mainly on base of second segment; first segment with light fulvous hair on basal part; fourth and fifth segments with long fuscous hair before the light bands; venter thinly covered all over with ochreous hair.

Foochow, Fukien, China, Nov. 16, 1914 (*C. R. Kellogg*, 243). From Prof. C. F. Baker.

Something like *C. fodiens*, Kirby, but of gigantic size. *C. mongolicus*, Pérez, from Mongolia, has the red hair on thorax above, but it is very much smaller.

*Colletes friesei*, n. n.

*Colletes mongolicus*, Friese, Ann. Mus. Zool. Ac. Sci. St. Pétersbourg, xviii. (1913), p. xlix (not of Pérez, 1903).

*Megachile (Paramegachile) lobensis*, sp. n.

♀.—Length about 12 mm.

Black, with white hair, which is short and thin on head and thorax above, so that the general effect is grey. Abdomen with entire white hair-bands on segments 2 to 5; ventral scopa white (with a faint creamy tint, contrasting with the pure white of the dorsal bands), black on last segment; last dorsal segment straight in profile, with scanty short dark hair. Mandibles quadridentate, the basal half covered with white hair; clypeus convex, densely punctured, with a smooth shining median line, lower margin subangular on each side; supra-clypeal area densely punctured, with a shining area in middle; flagellum obscure fuscous beneath,

except at base; mesothorax and scutellum dull, with small extremely dense punctures; metathorax with long white hair all over: tegulæ dark rufo-fuscous, with a broad hyaline margin. Wings hyaline, faintly dusky; hind basitarsi moderately broad, the hair on inner side clear ferruginous. Abdomen finely punctured.

Kobe, Japan (*Baker*, 1419).

Not closely allied to any described Japanese species. In Friese's Palearctic table it runs to *M. leucomalla*, Gerst., but has no dark hair on thorax. In the table of Oriental species it runs to *M. femorata*, Smith, but is larger and has black legs. Smith's species requires a new name, as follows:—

*Megachile femoratella*, n. n.

*Megachile femorata*, Smith, New Sp. Hym. Brit. Mus. (1879) p. 68 (India). Not *M. femorata*, Smith, 1853.

*Nomia rhododonta*, sp. n.

♀.—Black; postscutellum with a deeply bidentate process, the teeth red; abdomen with broad emerald-green bands, shot with vermilion, on hind margins of segments 2 to 4; clypeus and supraclypeal area carinate; wings reddish, second submarginal cell short, higher than broad. In all respects very close to *M. incerta*, Gribodo, but somewhat larger, with the large tegulæ bright clear ferruginous, the mesothorax sparsely punctured with large and very small punctures, the upper border of prothorax and tubercles with light fulvous hair, and a large tuft of same before tegulæ; hair of mesopleura ochreous-tinted; punctures of second abdominal segment not so dense.

Baton (Boutou?), Celebes (Queensland Museum, 54).

This appears to be identical with the species from Celebes mentioned in *Trans. Amer. Ent. Soc.* xxxi. p. 322, but not named.

*Melissodes hymenoxidis*, Cockerell.

Tolland, Colorado, Aug. 24, 1911 (*Cockerell*).

*Epeolus humillimus*, sp. n.

♂.—Length 6·5–7 mm.

Black, with the mandibles red except at base, a red spot at each side of labrum; tegulæ, tubercles, knees, tibiæ at apex, and the tarsi all ferruginous; mandibles bidentate;

maxillary palpi 2-jointed; antennæ black; clypeus densely and minutely rugoso-punctate; upper part of face covered with pure white hair; mesothorax and scutellum dull and rough, scutellum bilobed; mesothorax with the anterior and posterior corners, and a pair of well-defined broad bands anteriorly, with greyish-white pubescence; mesopleura with only the upper half densely pubescent; scutellum covered with white hair posteriorly. Wings with the apical margin dusky. Abdomen with the usual bands of creamy-white tomentum, those on apices of segments 1 to 5 narrowly interrupted in middle, on 2 to 4 concave anteriorly sublaterally, on 2 connected with a round patch at sides, on 5 reduced to a pair of transverse patches; band on sixth segment entire; black area on first segment a broad transverse band, obliquely truncate at each end.

Variety *a*. Bands on mesothorax anteriorly altered to broad suffused patches, partly coallescent.

Pullman, Washington State, Aug. 2, 1908 (*W. M. Mann*).

In Robertson's table (*Canad. Entom. 1903*, p. 288) this runs out, having the pleura below quite closely punctured, the scutellum bilobed, and the mandibles toothed. It may be compared with *E. interruptus*, Rob., but that is larger, with red legs and scape. *E. olympiellus*, Ckll., is larger, with the labrum entirely black and the tegulæ darker; it comes from the moist coast region, and evidently *E. humillimus* is its representative in the dry interior. The two may be found to intergrade in the country between.

*Nomia (Hoplonomia) expulsa*, sp. n.

♂.—Length about 12.5 mm.

Black, with the hind tibiæ (except a black spot) and tarsi dull ferruginous. Eyes reddish brown, strongly converging below; face covered with ochreous hair; flagellum dusky red beneath; head and thorax dorsally with rather coarse ochreous hair, ventrally with white hair, the transition gradual at sides; mesothorax and scutellum dull and rugose; postscutellum with a pair of long spines, red at end; tegulæ large, brown, with a broad whitish border. Wings dusky reddish; stigma (which is small) and nervures ferruginous; first r. n. joining second s.m. very near its end. Legs with whitish hair; hind femora enormously swollen, subglobose, conoid; hind tibiæ extremely short and stout, triangular, the spurs arising from the extremely produced inner apical corner; hind basitarsi greatly broadened,

broadest toward the base, where they are posteriorly concave. Abdomen dull and hairy, the hind margins of the first five segments (especially the fourth and fifth) whitened or pallid; before the light tegumentary bands is fuscous hair, except on the first segment, where the band itself is feebly developed.

“Guyane, Maroni” (Queensland Mus. 46).

This seems out of place in the Neotropical fauna, and I wondered whether it could be an Old World species with wrong locality-label. However, I fail to find any such species in the fauna of Asia or Africa, and the structure of the hind legs, most significantly the basitarsi, approaches that of the American *N. nortoni*, Cresson. Consequently I believe it is really an American insect.

*Melipona chrysuræ*, sp. n.

♂.—Length 9 mm.

Robust; head and thorax black, with short pale hair, ochreous dorsally; face dark, except that there is a reddish spot below each antenna, and the lower edge of clypeus is narrowly red; labrum and apical part of mandibles reddish; scape with a red spot at base and a less conspicuous one at apex; flagellum very long, ferruginous beneath; scutellum and axillæ clear fulvous; metathorax suffused with reddish; clypeus dull, but a polished shining band marking its upper end; tubercles fulvous; mesothorax dull, densely rugosopunctate, with two shining lines on each side, and a median line of greyish-white hair; scutellum dull; base of metathorax shining; tegulæ large, ferruginous. Wings reddish hyaline, stigma and nervures ferruginous. Legs more or less reddish, the anterior femora beneath and tibiæ in front, middle tibiæ at apex, and hind tibiæ suffusedly on inner side, ferruginous. Abdomen broad, dull orange, the first two segments combined with a very broad X-like dark brown mark, the upper arms of which reach the sides of first segment, but the lower arms go little more than halfway to sides of second; segments 3 to 5 dark at base; sixth dark with pale hind margin; venter pale fulvous suffusedly marked with fuscous.

Olokemeji, Ibadan, Nigeria (Queensland Mus., 55).

Nearest to *Trigona* or *Melipona tomentosa*, Friese, but larger, and differing in the details of coloration.

*Perdita interrupta*, Cresson.

Claremont, California (Baker; Pomona College, 227). This is the first definite locality; Cresson only gave "California."

*Prosopis littleri*, sp. n.

♂.—Length about 5.5 mm.

Rather slender; black, marked with pale lemon-yellow and bright ferruginous; face below antennæ, as well as labrum and mandibles, yellow; the lateral marks extend upward along orbital margin as a very narrow band, coming to a point about halfway up front; scape with a yellow band in front; flagellum ferruginous beneath; mesothorax and scutellum dull, with no punctures visible under a lens; base of metathorax dull, not sculptured; narrow line on prothorax above, and tubercles, white; tegulæ black. Wings dusky, first r. n. meeting first t.-c.; knees, anterior tibiæ (except sometimes a small spot), middle tibiæ (except a large patch behind), hind tibiæ at base and extreme apex, and all the tarsi (except extreme apex of middle and hind ones) ferruginous. Abdomen with the basal two segments bright ferruginous, the others black; the first segment is black at base, and the second has a large black patch on each side, or these markings may be practically obsolete.

George Town, Tasmania, March 1915 (*F. M. Littler*, 2593).

Nearest to the mainland *P. sanguinipicta*, Ckll., but easily known by the greater amount of red on abdomen.

*Prosopis mediovirens*, Cockerell.

Launceston, Tasmania, Feb. 13, 1916 (*Littler*, 2809). The male sent is 4.5 mm. long, which is larger than the type. New to Tasmania.

*Prosopis chlorosoma*, Cockerell.

Launceston, Tasmania, Feb. 13, 1916 (*Littler*, 2810, pars). New to Tasmania.

*Prosopis perhumilis*, Cockerell.

Launceston, Tasmania, Feb. 13, 1916 (*Littler*, 2810, pars), and a male, Feb. 12, 1914 (*Littler*, 2811). The occurrence of this species in Tasmania (*cf.* *Descr. Rec. Bees*, lxii. p. 54) is thus confirmed.

*Prosopis brevior*, sp. n.

*Prosopis perhumilis*, Cockerell, Mem. Queensl. Mus. v. (1916) p. 197 (Oxley, Brisbane), ♂.

I am now convinced that the Queensland supposed *perhumilis* must be separated. It is easily distinguished (♂) by the shorter clypeus and larger supraclypeal mark. In *perhumilis* the parallel-sided part of clypeus is higher than broad, in *brevior* it is very much broader than high. In *brevior* the lateral face-marks are longer, and the yellow stripe on scape is broader.

*Euryglossa tasmanica*, sp. n.

♀.—Length about 6·5 mm.

Head and thorax black without markings. Abdomen very dark reddish, with a large subtriangular yellow patch on each side of segments 2 to 5, those on 5 only narrowly separated in the middle line; mandibles yellow basally, beyond that ferruginous, and dark at apex; clypeus and supraclypeal area shining, sparsely punctured; supraclypeal area strongly elevated and angulate above; flagellum rather obscure red beneath; thorax only moderately shining, with scanty pale hair; mesothorax with minute very sparse punctures on a dullish ground; metathorax obscurely reddish; tegulæ dark. Wings slightly dusky, stigma and nervures dull ferruginous, venation ordinary. Anterior and middle knees, anterior tibiæ in front, and stripe on middle ones yellow or reddish-yellow. Abdomen shining; venter of abdomen rufo-testaceous, with no markings except that middle of first segment is piceous.

Launceston, Tasmania, 3 ♀, Dec. 27, 1915 (*Littler*, 2806).

Related to *E. maculata*, Sm., from Swan River, but that has yellow legs.

*Callomelitta nigrofasciata*, sp. n.

♀.—Length about 9 mm.

Shining black, with lateral thirds of mesothorax (narrower posteriorly) terra-cotta red; anterior femora at apex, anterior tibiæ (except a black mark behind) and their basitarsi red; apical plate of abdomen small and narrow, subclavate.

Very close to *C. littleri*, Ckll., but apparently not its male, on account of the paler (though strongly dusky) wings, the broad black band down middle of mesothorax, and the black

tegulae (in *littleri* these are clear red). The second sub-marginal cell is much narrower below than in *littleri*. The tubercles are black (red in *littleri*).

Launceston, Tasmania, Dec. 27, 1915 (*Littler*, 2272).

*Halictus erythrurus*, Cockerell.

Launceston, Tasmania, Dec. 19 and 25, 1915 (*Littler*, 2807). New to Tasmania.

*Halictus tasmaniae* (Cockerell).

St. Helens, Tasmania, Jan. 1-4, 1916 (*Littler*, 2808). The mesothorax is very faintly greenish.

*Trigona parastigma*, sp. n.

*Trigona stigma*, Cockerell, 'Psyche,' 1913, p. 11 (Las Sabanas, Panama).

A specimen from Maroni, French Guiana (Queensland Mus., 53), differs from the Panama and Guatemala insect by the larger, broader head, the sides of the face broadly and strongly white-pruinose. This must be the true *stigma*, of which Smith says, "head wider than the thorax, the face anteriorly having a silvery pile." In the other form, which I have hitherto regarded as *T. stigma*, the head is not so conspicuously broad, and while the face has a very thin pubescence, there is nothing to produce a white surface. The male from Trinidad seems to belong to *T. parastigma*. The two species are certainly very closely allied, and yet evidently distinct.

*Andrena ribifloris*, Viereck & Cockerell.

♀.—Variety with pale hair, the long hair on first two abdominal segments white.

Near Gresham, Colorado, at flowers of *Ribes saxosum*, June 8 (*W. P. Cockerell*).

*Andrena opacissima*, sp. n.

♀.—Length about 8 mm.; anterior wing 7.2 mm.

Dull black, the head and thorax with long white hair, faintly creamy dorsally; facial quadrangle broader than long; cheeks with very long hair; process of labrum small, obtusely pointed; clypeus with long hair, feebly punctured, minutely transversely striate; facial foveæ rather broad,



warm reddish; antennæ black; vertex dull, not punctured; mesothorax dull, without any distinct punctures; area of metathorax dull, without plicæ; tegulæ piceous. Wings hyaline, the large stigma and nervures dull ferruginous; second s.m. broad, receiving first r. n. before middle. Legs black, with pale hair, that on inner side of hind basitarsi very pale ochreous. Abdomen broad, dull, with a slight satiny gloss, impunctate; second segment feebly depressed about two-fifths; white hair at sides of first segment, and segments 2 to 5 with long white hair-bands, very weak in middle of second, apical hair slightly brownish.

Indian Creek, Nampa, Idaho, at flowers of willow, April 26, 1916 (*Goldie McGlothlen*).

Easily known from *A. nigratarsis*, V. & C., and *A. brachycarpæ*, V. & C., by the dull abdomen, with the surface microscopically cancellate. It is nearest to *A. nudiscopa*, Vier., and *A. mustelicolor*, Vier., but is smaller, with reddish facial foveæ and wings not reddened. These two species have not yet been fully described, but I have specimens determined by Viereck. The hind basitarsus of *opacissima* is slender, only about half as broad as the tibia at end, a character of *nudiscopa* (syn. *angustitarsata*, Vier., *vide* Viereck *in litt.*) rather than *mustelicolor*. On the other hand, the dull minutely-roughened clypeus is that of *mustelicolor* rather than *nudiscopa*. The paler, dark margined stigma also distinguishes the new species from my example of *nudiscopa*.

*Andrena politissima*, sp. n.

♀.—Length a little over 9 mm.

Black, shining, the head and thorax with long pale hair, distinctly ochreous dorsally; clypeus with very long hair; facial quadrangle broader than long; process of labrum narrowly truncate; malar space short but distinct; clypeus shining, with distinct rather dense punctures, no smooth median line; facial foveæ rather broad, very pale ochreous; antennæ black, third joint little (about 4 per cent.) shorter than next two combined; mesothorax and scutellum shining, with strong scattered punctures; postscutellum prominent in middle; area of metathorax distinctly defined, dull, with a median ridge and rather weak though large oblique lateral plicæ, giving a fluted effect; tegulæ piceous. Wings dusky, greyish, yellowish basally; stigma and nervures dusky reddish; second s.m. about as broad as high, receiving first r. n. about middle. Legs black, with pale hair; middle and hind

basitarsi rather broad, with pale ochreous hair on inner side. Abdomen extremely polished, impunctate, the second and third segments depressed in middle nearly to base, the basal elevated parts weakly punctured; segments 1 to 4 without hair-bands, but 3 and 4 with pale hair at sides; fifth segment and apex with abundant pale, slightly creamy hair.

Nampa, Idaho, at flowers of willow, April 26, 1916 (*Goldie McGlothlen*).

Related to *A. cyanophila*, Ckll., but easily separated by the very feeble punctures at base of second and third abdominal segments. It seems to be close to *A. trachandrenoides*, Vier., which has never been fully described; but that has the third antennal joint longer, and on that account is excluded by Viereck from the subgenus *Trachandrena*, to which *A. politissima* certainly belongs.

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XVIII.—*The Coleoptera of the Falkland Islands.*

By G. C. CHAMPION, F.Z.S.

DR. GÜNTHER ENDERLEIN'S account of the insects of Tierra del Fuego, the Falklands, and South Georgia obtained by the Swedish South Polar Expedition, published in the 'Kungl. Svenska Vetenskapsakademiens Handlingar,' Band xlvi. no. 3, pp. 1-170, with four plates and numerous text-figures, brings our knowledge of the fauna of these regions up to 1912. His paper does not, of course, include some of the Coleoptera captured by Charles Darwin in Tierra del Fuego and the Falklands during the voyage of the 'Beagle,' which have remained for upwards of thirty years unidentified and buried, as it were, amongst the "Accessions" in the British Museum. The Falkland beetles named by the three members of the Waterhouse family (G. R., C. O., and F.), to whom the Museum is indebted for most of them, are enumerated in Enderlein's list. The remainder, supplemented by various other collections from the same islands received during recent years, including a few species obtained by Fleet-Surgeon M. Cameron in December, 1914, form the material for the present paper, which adds 11 Coleoptera to the Falkland list. The 34 (not 35, as stated) enumerated by Enderlein include 16 apterous Curculionidæ, probably all